Elastic electron scattering cross section from ^{208}Pb

Ref: J.W. Negele, Rev. Mod. Phys. 54, 913 (1982)

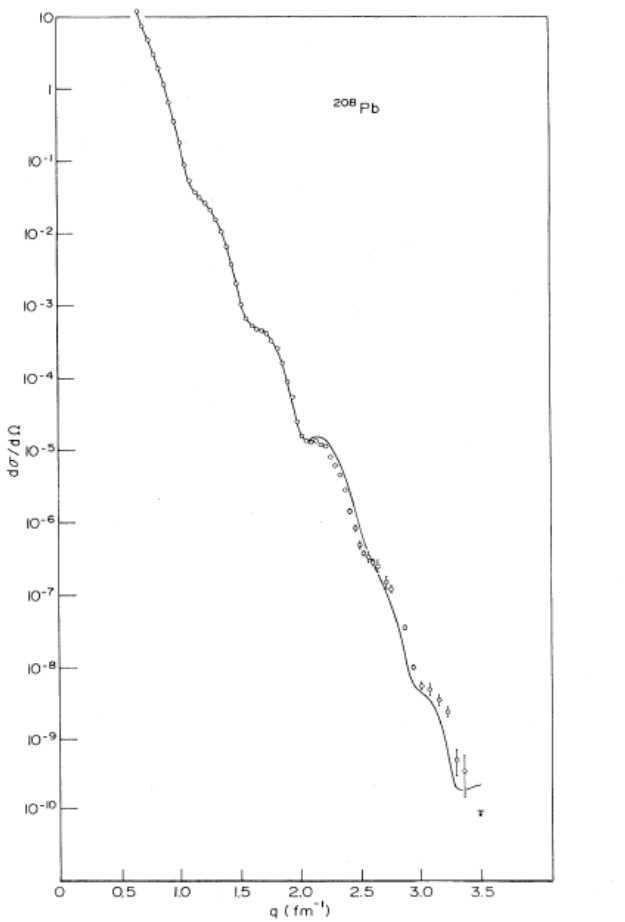


FIG. 10. Cross sections for elastic electron scattering from ^{208}Pb at 502 MeV compared with DME mean-field theory prediction (solid line).

Charge densities for various nuclei (electron scattering data vs. theory)

Ref: J.W. Negele, Rev. Mod. Phys. 54, 913 (1982)

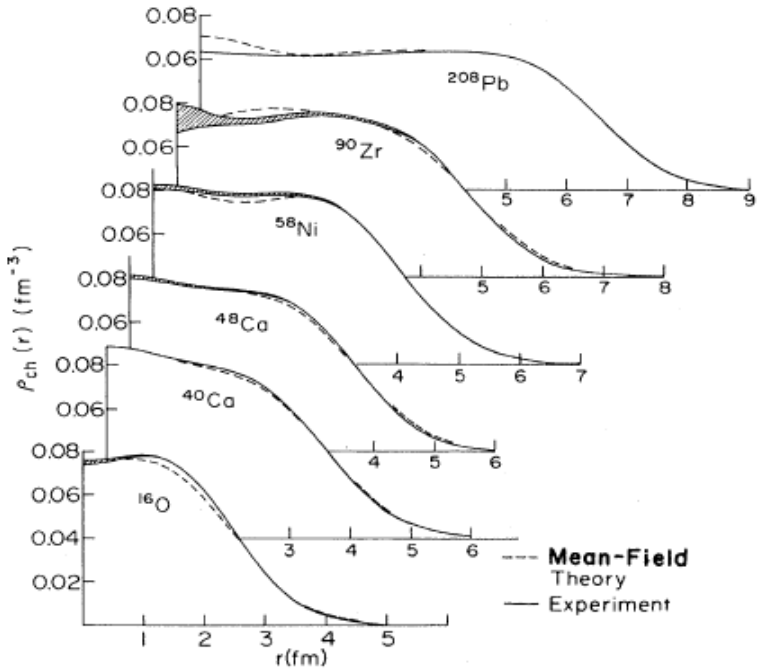
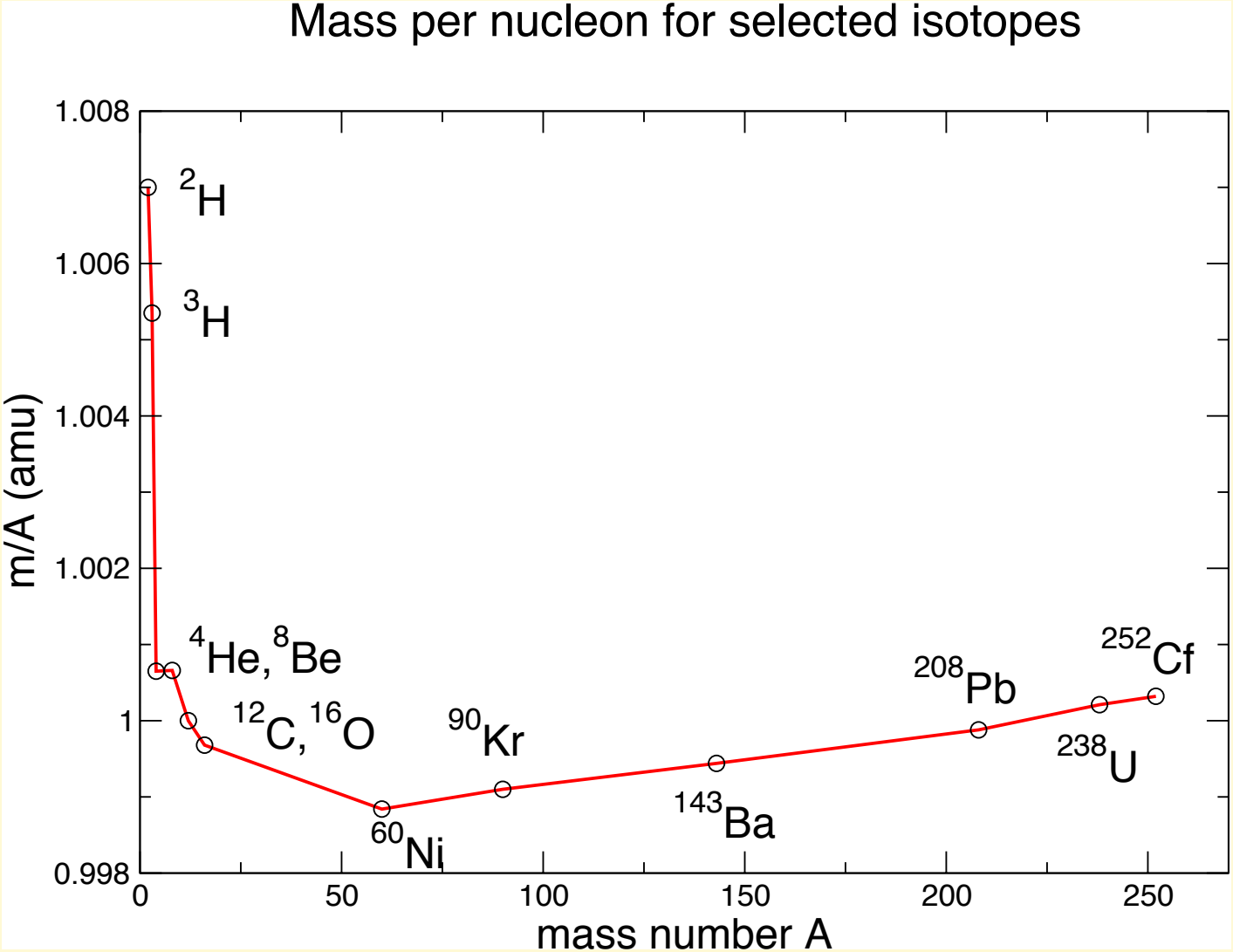
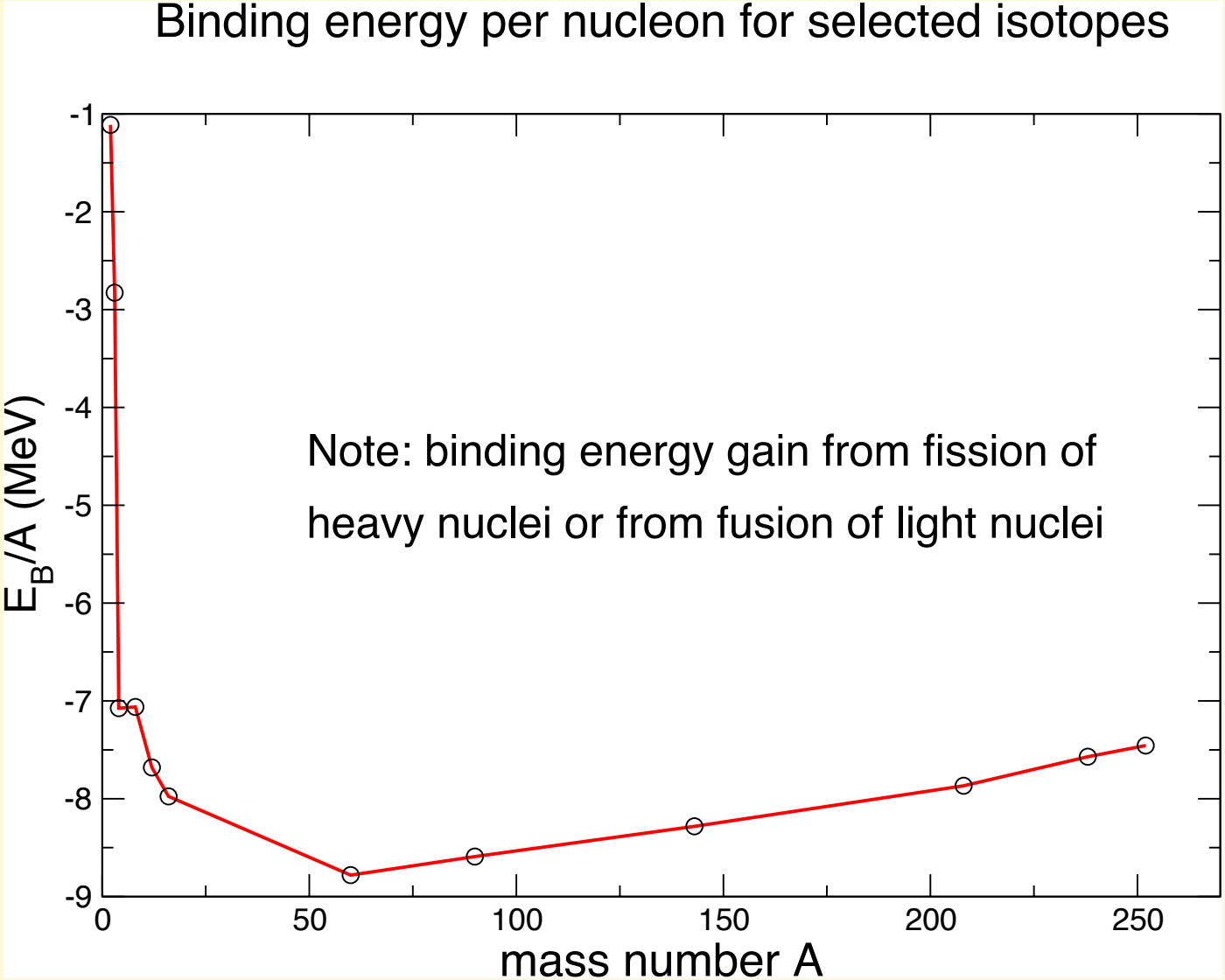


FIG. 11. Comparison of DME mean-field theory charge distributions in spherical nuclei (dashed lines) with empirical charge densities. The solid curves and shaded regions represent the error envelope of densities consistent with the measured cross sections and their experimental uncertainties.

Exp. data: nuclear masses



Exp. data: binding energies



Bethe-Weizsäcker semi-empirical mass formula: E_B /A (MeV) in N-Z plane shows "valley of stability"